

Basic ECG Lecture ST Depression and T-Inversion

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102.07.10

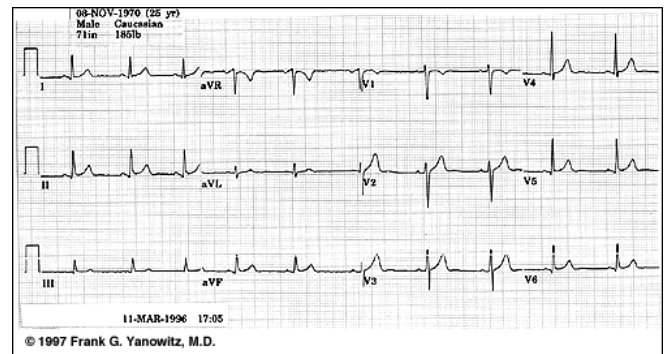
Not (IF and Only IF)
非(若且惟若)

- X \longleftrightarrow (IF and Only IF) \longrightarrow Y
- IF Dehydration \longrightarrow  \longrightarrow Tachycardia

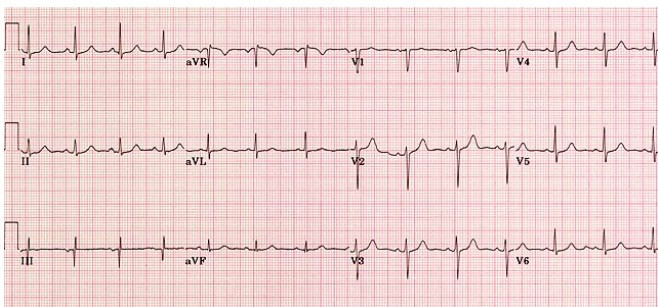
ECG Interpretation

- By Yourself
- Size Tells Something, Only Something
- Δ Morphology
 - Little Abnormal Findings in Young Patient
 - Significant Abnormal Findings in Old Patient
 - Little Abnormal Findings in Old Patient

Normal ECG



Normal ECG

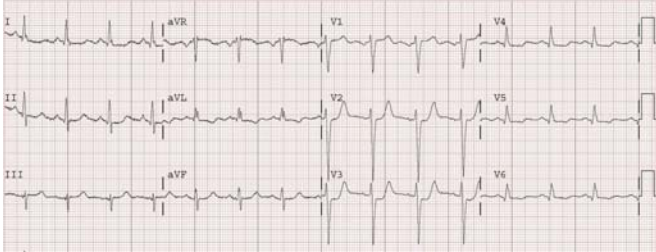


Question

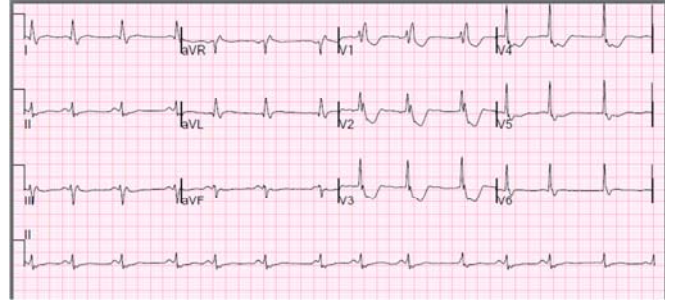
- 正常的ECG T波向下的有哪幾個導程？
- 正常的T波是
 - A. Rapid UpStroke and Slow DownStroke
 - OR
 - B. Slow UpStroke and Rapid DownStroke

Case A

40 Y/O, With Concerning Chest Pain



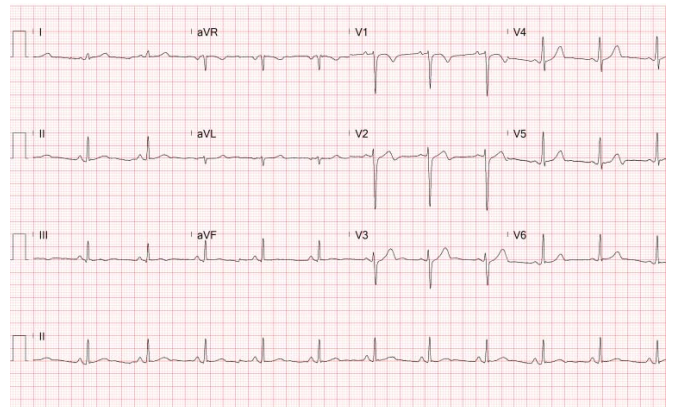
• 50 Y/O Male resuscitated from VFib



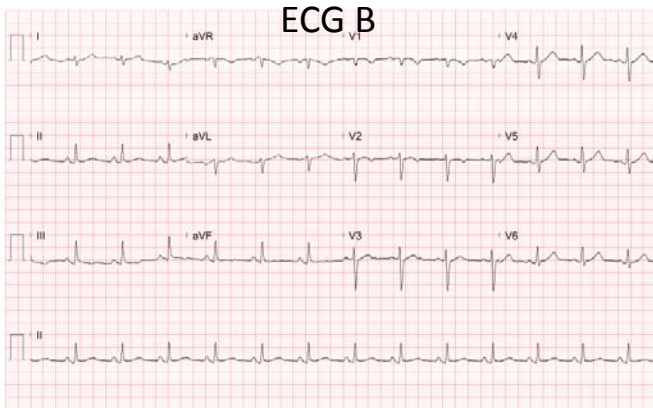
Case B

- 28 Years Old Male, 平常有作重量訓練, 踢砂包, 之前腳受傷, 最近沒有運動了。今天Syncope。
- No Orthostatic Change
- No Dyspnea

ECG B



ECG B



ECG B



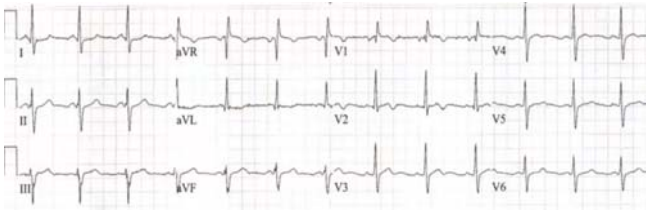
Characteristic of ECG on PE

- Large pulmonary embolus.
- an S1Q3T3 pattern a prominent S wave in lead I
- a Q wave and inverted T wave in lead III
- sinus tachycardia T wave inversion in leads V1 - V3 Right Bundle Branch Block low amplitude deflections
- A simple emergency physician performed bedside ultrasound would have confirmed this. Troponin will not help you in this diagnosis because, when there are T-wave inversions (in my experience), the troponin is positive. (This would make a good study). Kosuge et al.

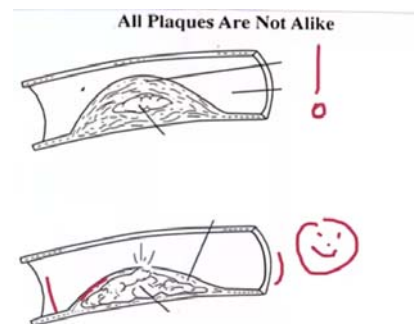
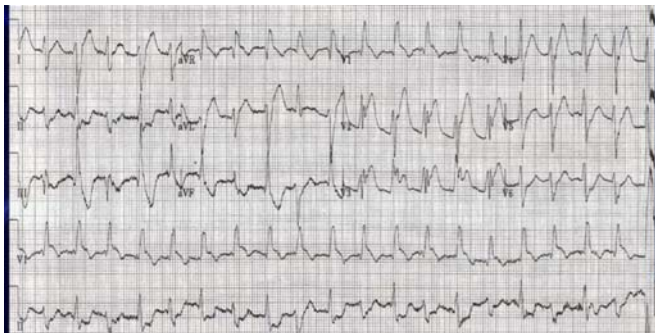
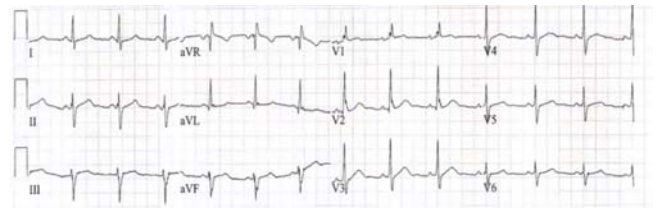
Case C

- 47 Years Old Male, With Negative Stress Test 6 Days Ago
- Concerning Chest Pain About 30 Mins Ago
Pain Free Now

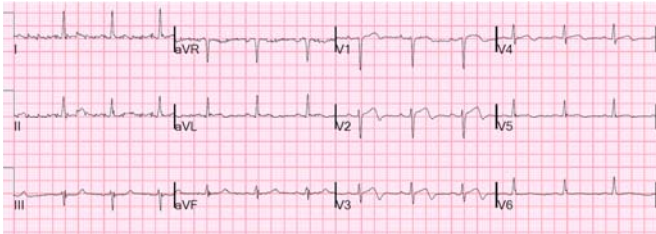
ECG C



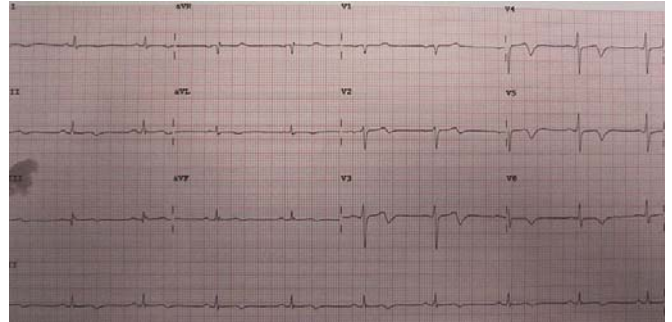
ECG C Baselin



Example

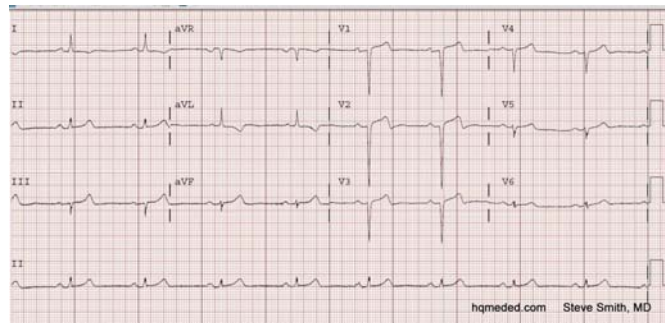


Example

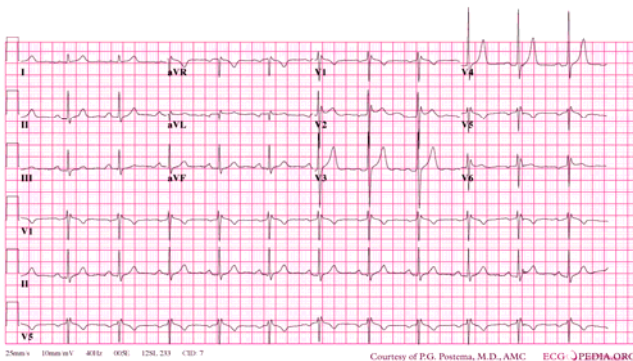


For Comparison

- **Pain free** at the time of the EKG
- **Open artery or collateral flow.**
- **Preserved R-waves**

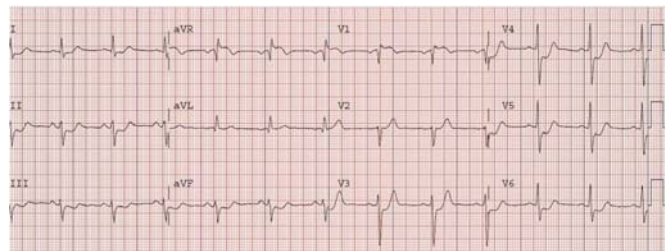


For Comparison



Case D

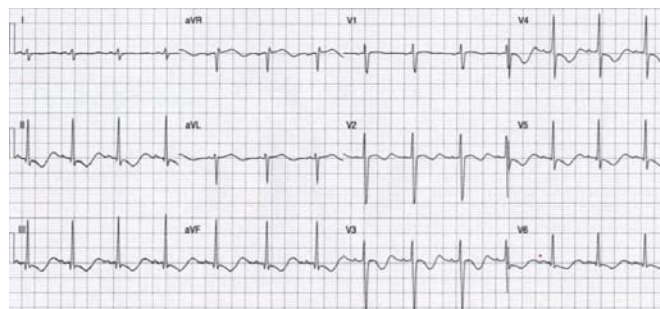
- The patient presented with chest pain and had this ECG which is a very high risk situation.



- Except V1,Lead aVR, More than 6 leads with ST Depression
- Lead aVR with STE at least 1mm

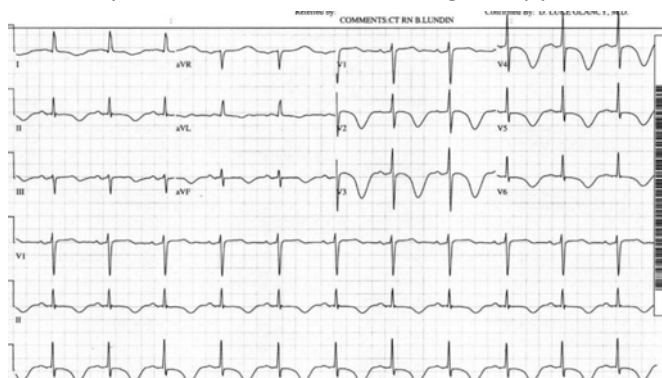
Case E

40 Y/O Male Nausea/Vomiting/Diarrhea

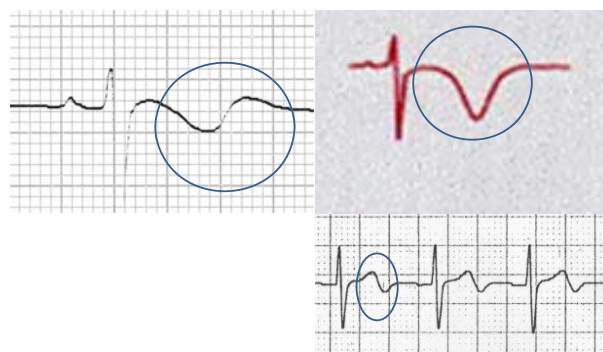


Case F

- 77 y/o Female, Nausea/Vomiting, Sleepy



T wave Inversion



- Amal EKG
- Dr. Smith's ECG Blog
- Life in the Fastlane
- KG-EKG Press

END